

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A printing apparatus, comprising:
 - (A) a carry mechanism that carries a medium along a predetermined direction;
 - (B) a nozzle that performs a moving and ejecting operation for ejecting ink toward the medium while moving relatively with respect to the medium in an intersecting direction that intersects the predetermined direction, during an interval of a carry operation by the carry mechanism, the nozzle ejecting a first ink droplet and ejecting, after the first ink droplet has been ejected, a second ink droplet that has a size different from a size of the first ink droplet, the second ink droplet being ejected in between two first ink droplets ejected in one moving and ejecting operation; and
 - (C) a signal output section that outputs a first timing defining signal defining periodically in a predetermined period an ejecting timing for ejecting the first ink droplet a periodical timing for ejecting ink from the nozzle toward a position corresponding to a pixel configuring an image to be printed, and a second timing defining signal defining periodically in a predetermined period an ejecting timing for ejecting the first ink droplet a periodical timing for ejecting ink from the nozzle toward a position displaced in the intersecting direction from the position corresponding to a pixel configuring an image to be printed,
wherein the signal output section outputs either the first timing defining signal or the second timing defining signal for each in one moving and ejecting operation, and
wherein one raster line is formed by at least one or more times of the first timing defining signal and at least one or more times of the second timing defining signal being used in two or more moving and ejecting operations, and by a plurality of dots being formed with the first ink droplet and the second ink droplet on the medium.
2. (original): A printing apparatus according to claim 1,
wherein the first timing defining signal and the second timing defining signal are output alternately from the signal output section.

3. (withdrawn): A printing apparatus according to claim 1,
wherein a displacement width between the position corresponding to the pixel and the displaced position is narrower than a spacing between pixels configuring an image to be printed.

4. (withdrawn): A printing apparatus according to claim 3,
wherein the displacement width is a half of the spacing between pixels configuring an image to be printed.

5. (previously presented): A printing apparatus according to claim 1,
wherein ink is ejected successively two or more times from the nozzle according to a certain timing defined by at least one of the first defining timing signal and the second defining timing signal.

6. (original): A printing apparatus according to claim 5,
wherein of the ink ejected successively two or more times from the nozzle according to the certain timing, ink ejected first is ejected toward the position corresponding to the pixel or the displaced position.

7. (previously presented): A printing apparatus according to claim 5,
wherein when ink is ejected successively two or more times from the nozzle according to the certain timing, a spacing between a position on the medium on which ink ejected first lands and a position on the medium on which ink ejected last lands is wider than a spacing between pixels configuring an image to be printed.

8. (previously presented): A printing apparatus according to claim 5,
wherein when ink is ejected successively two or more times from the nozzle according to the certain timing, the quantity of ink ejected each time differs.

9. (previously presented): A printing apparatus according to claim 1, wherein the moving and ejecting operation for ejecting ink to be ejected toward a position corresponding to a certain pixel configuring the image and a position displaced from such position is different from the moving and ejecting operation for ejecting ink to be ejected toward a position corresponding to another pixel adjacent to the certain pixel in a moving direction of the nozzle and a position displaced from such position.

10. (previously presented): A printing apparatus according to claim 1, comprising a plurality of the nozzles.

11. (withdrawn-currently amended): A printing apparatus comprising:

- (A) a carry mechanism that carries a medium along a predetermined direction;
- (B) a nozzle that performs a moving and ejecting operation for ejecting ink toward the medium while moving relatively with respect to the medium in an intersecting direction that intersects the predetermined direction, during an interval of a carry operation by the carry mechanism, the nozzle ejecting a first ink droplet and ejecting after the first ink droplet has been ejected a second ink droplet that has a size different from a size of the first ink droplet, the second ink droplet being ejected in between two first ink droplets ejected in one moving and ejecting operation; and
- (C) a signal output section that outputs a first timing defining signal defining periodically in a predetermined period an ejecting timing for ejecting the first ink droplet ~~a periodical timing for ejecting ink~~ from the nozzle toward a position corresponding to a pixel configuring an image to be printed, and a second timing defining signal defining periodically in a predetermined period an ejecting timing for ejecting the first ink droplet ~~a periodical timing for ejecting ink~~ from the nozzle toward a position displaced in the intersecting direction from the position corresponding to a pixel configuring an image to be printed, wherein the signal output section outputs either the first timing defining signal or the second timing defining signal ~~for each in one~~ moving and ejecting operation, wherein

(D) one raster line is formed by at least one or more times of the first timing defining signal and at least one or more times of the second timing defining signal being used in two or more moving and ejecting operations, and by a plurality of dots being formed with the first ink droplet and the second ink droplet on the medium,

(E) the first timing defining signal and the second timing defining signal are output alternately from the signal output section,

(F) a displacement width between the position corresponding to the pixel and the displaced position is narrower than a spacing between pixels configuring an image to be printed,

(G) the displacement width is a half of the spacing between pixels configuring an image to be printed,

(H) ink is ejected successively two or more times from the nozzle according to a certain timing defined by at least one of the first defining timing signal and the second defining timing signal,

(I) of the ink ejected successively two or more times from the nozzle according to the certain timing, ink ejected first is ejected toward the position corresponding to the pixel or the displaced position,

(J) when ink is ejected successively two or more times from the nozzle according to the certain timing, a spacing between a position on the medium on which ink first ejected lands and a position on the medium on which ink ejected last lands is wider than a spacing between pixels configuring an image to be printed,

(K) when ink is ejected successively two or more times from the nozzle according to the certain timing, the quantity of ink ejected each time differs,

(L) the moving and ejecting operation for ejecting ink to be ejected toward a position corresponding to a certain pixel configuring the image and a position displaced from such position, is different from the moving and ejecting operation for ejecting ink to be ejected toward a position corresponding to another pixel adjacent to the certain pixel in a moving direction of the nozzle, and a position displaced from such position, and

(M) the printing apparatus is provided with a plurality of the nozzles.

12. (withdrawn): A printing method comprising:
a step of carrying a medium along a predetermined direction;
a step of performing a moving and ejecting operation for ejecting ink toward the medium from a nozzle while moving the nozzle relatively with respect to the medium, during an interval of carrying the medium;
a step of outputting a first timing defining signal defining a periodical timing for ejecting ink from the nozzle toward a position corresponding to a pixel configuring an image to be printed;
a step of outputting a second timing defining signal for defining a periodical timing to eject ink from the nozzle toward a position displaced from the position corresponding to a pixel configuring an image to be printed; and
a step of selecting either the first timing defining signal or the second timing defining signal as a signal to be output for each moving and ejecting operation.
13. (withdrawn): A program that executes
a step of carrying a medium along a predetermined direction,
a step of performing a moving and ejecting operation for ejecting ink toward the medium from a nozzle while moving the nozzle relatively with respect to the medium, during an interval of carrying the medium,
a step of outputting a first timing defining signal defining a periodical timing for ejecting ink from the nozzle toward a position corresponding to a pixel configuring an image to be printed,
a step of outputting a second timing defining signal defining a periodical timing for ejecting ink from the nozzle toward a position displaced from the position corresponding to a pixel configuring an image to be printed, and
a step of selecting either the first timing defining signal or the second timing defining signal as a signal to be output for each moving and ejecting operation.
14. (withdrawn): A printing system comprising a computer and a printing apparatus capable of communicating with the computer, wherein the printing apparatus includes:

a carry mechanism that carries a medium along a predetermined direction;
a nozzle that performs a moving and ejecting operation for ejecting ink toward the medium while moving relatively with respect to the medium, during an interval of a carry operation by the carry mechanism; and

a signal output section that outputs a first timing defining signal defining a periodical timing for ejecting ink from the nozzle toward a position corresponding to a pixel configuring an image to be printed, and a second timing defining signal defining a periodical timing for ejecting ink from the nozzle toward a position displaced from the position corresponding to a pixel configuring an image to be printed, wherein the signal output section outputs either the first timing defining signal or the second timing defining signal for each moving and ejecting operation.

15. (previously presented): A printing method comprising:
using the printing apparatus according to claim 1.

16. (previously presented): A printing system comprising:
a computer; and
the printing apparatus according to claim 1, capable of communicating with the computer.